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Short Course 1

Tumors of the kidney in adults

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An overview of renal cell carcinoma classification

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Classification of the renal cell carcinoma has changed during the last decades. Since the initial classification into clear cell, granular cell and spindle cell carcinoma, many changes have occurred.

- In 1976, Klein and Valensi rediscovered the oncocytoma (1), previously described by Zippel in 1942 (2), and finally accepted its benignity.
- In 1985, Thoenes *et al.* (3) introduced the concept of chromophobe cell carcinoma in the European literature.
- In 1986, the Mainz classification appeared introducing the previous changes and chromophil cell cancer (4). This last entity was designated as papillary renal cell carcinomas in the American classification (5).
- In 1993, Kovacs introduced of the genetic approach to the classification of renal carcinoma (6).
- In 1996, in the workshop "Impact of Molecular Genetics on the Classification of the Renal Cell Tumours" (7) the Heildelberg classification appeared. It had the peculiarity of mixing genetic features with morphological findings because genotypical distinct renal tumors can be recognized and diagnosed using hisfopathological criteria (8).
- In 1997, an international consensus conference in Rochester accepted the Heildelberg classification, with minor variations (9).
- In 1998, the WHO's new classification introduced the majority of these new entities (10).

In this manner the accepted classification considers the following:

i) Conventional renal cell carcinoma
ii) Chromophil (papillary) cell carcinoma
iii) Chromophobe renal cell carcinoma
iv) Neuroendocrine renal cell carcinoma
v) Unclassified renal cell carcinoma

In spite of the apparent simplicity of this classification there are a lot of questions and dilemmas at the moment of the diagnosis, including: i) the eosinophilic cells variants; ii) the variants of the papillary carcinoma; iii) the diagnosis criteria in some chromophobe renal cell tumors; iv) the unclassified cells and growth patterns; and v) the morphological prognostic markers.

The intention of this short course is to determine guidelines for the moment of routine diagnosis of adult renal tumors, including children's type renal tumors, in any laboratory.

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Pediatric-type renal tumors in the adult

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Adult WAims' tumor

Wilms' tumor represents approximately 5-6% of all pediatric malignant tumors. Its frequency in the adult is difficult to assess, as most of the published cases are case reports lacking convincing photomicrographs and/or complete histological descriptions. Kilton (1), in a comprehensive review of the literature n 1980, found only 35 renal adult Wilms' tumor out of 192 documented cases that met the required criteria. Since then, individual cases have been reported but no comprehensive review of the same type has been published, apart from a report of 27 cases of adults with Wilms' tumor, published in 1990 *(2).* Although adult Wilms' tumor can occur at any age, it is more frequent in the very young adult, with a median age of 24 (age range 16-74 years).

Preoperative diagnosis is rarely made. Primary nephrectomy for suspicion of renal cell carcinoma is usually performed and Wilms' tumor is a surprise at histopathological examination. The histopathology of adult Wilms' tumor is similar to patterns observed in children (1, 3). Most cases of adult Wilms' tumor are triphasic